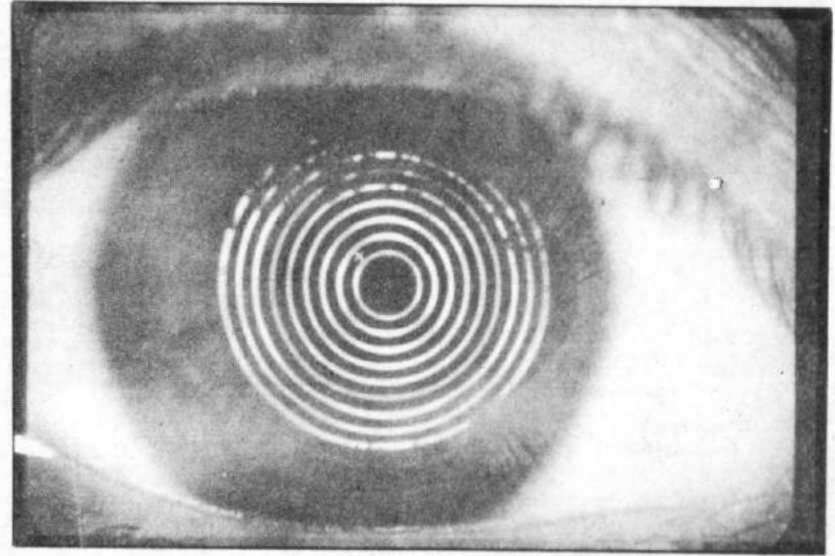
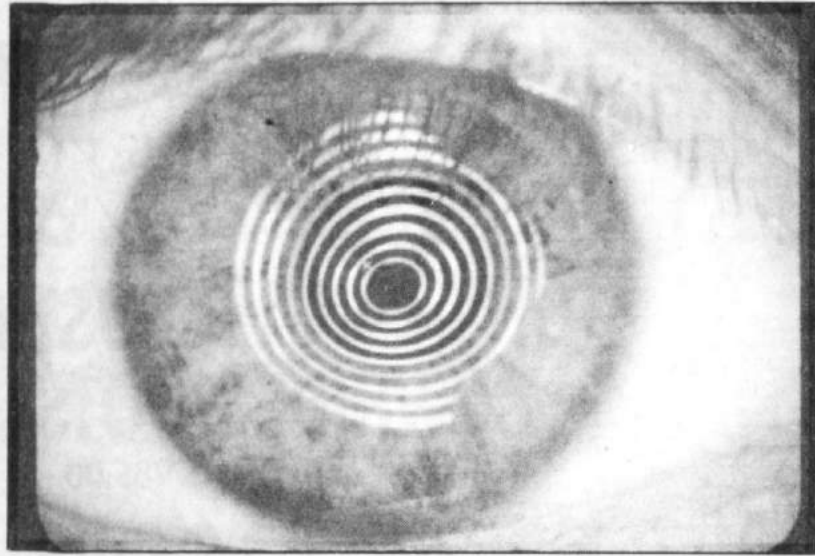


# YOUR HEALTH



Above left, a keratoconic eye. Notice the asymmetrical and more closely spaced rings. On the right is a normal eye; the rings are almost perfectly shaped.

## When corneas are misshapen...

By Ed Taylor  
Staff writer

New technological developments are helping patients with an unusual eye disease to see more clearly without surgery.

The disease is called keratoconus, and it is characterized by a misshapen cornea that makes it difficult for the patient to focus.

Using a special camera and computer, eye doctors can identify keratoconus patients and fit them with special hard contact lens that restore vision to almost 20/20, said Dr. Jeff Eger, a Tempe optometrist.

The camera, in effect, makes a topographical map of the eyeball. This is done by a bright light that shines through a series of rings onto the cornea.

In the normal eye, the rings will appear as almost perfect concentric circles.

However, in the keratoconic eye, the rings will be asymmetrical and more closely spaced in some places, like a topographical map of a mountain. This is because the cornea is shaped like a cone instead of an oval.

There is no cure, and the blurred vision that results from the condition is difficult to correct, Eger said. Some patients eventually need a cornea transplant because the condition is degenerative, he said.

However, he tries to delay surgery as long as possible by using the camera and a computer to design specially fitted, hard contact lenses.

The contact lens causes the eyeball to become more sym-

metrical; thus vision can be corrected to nearly 20/20, he said.

The lenses are made of a gas-permeable material that allows oxygen beneath the lens and improves comfort for the patient, he said.

The condition is relatively rare, affecting an estimated 1 percent of the population.

Its cause is unknown, but heredity appears to be a factor, Eger said.

"I've also noticed that my patients tend to be success-oriented," he said. "They do their jobs meticulously, and they may be under stress. The changes in the shape of the cone seem to take place during times of stress."

Eger said he has seen about 10 cases since 1977, and, so far, none have required a cornea transplant.